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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,170	01/18/2002	Masahiro Kanda	020066	7598

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ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP  
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WASHINGTON, DC 20006

EXAMINER

NGUYEN, CHAU N

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8/11

<b>Office Action Summary</b>	<b>Application N .</b>	<b>Applicant(s)</b>	
	10/050,170	KANDA, MASAHIRO	
	<b>Examin r</b>	<b>Art Unit</b>	
	Chau N Nguyen	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) Dec. 1-03.                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuma (5,824,962) in view of Iversen (3,816,641).

Katsuma discloses a rubber stopper (1) used in a waterproof connector (col. 2, lines 63-65), the rubber stopper being disposed between a covered cable and a connector housing of the waterproof connector. Katsuma does not specifically disclose the rubber stopper including a material that can bond the rubber stopper to a covering layer of the covered cable when the rubber stopper is heated. Iversen discloses a stopper (14) including a material that can bond the rubber stopper to a covering layer of a covered cable when the rubber stopper is heated (see the abstract, etc. the stopper is the same material as the sheath of the cable and which is heat-bonded to the cable so that the materials of the stopper and the sheath merge).

It would have been obvious to one skilled in the art to apply the teaching of Iversen in the connecting structure of Katsuma, etc. using a material (which is the same material as the sheath of the cable) which is heat-bonded to the cable so that the materials of the stopper and the sheath merge. Noted that the feature of the feature of the rubber stopper being bonded to the covering layer of the covered cable when the rubber stopper is heated by an environmental air surrounding the connector during a using state of the connector is disclosed in the modified connector of Katsuma since it comprises structure and material as claimed.

The modified rubber stopper of Katsuma also discloses the heating temperature during heating the stopper being higher than the temperature at which the stopper is assembled in the connector.

Re claim 11, it would have been obvious to one skilled in the art to use PVC for the covering layer of Katsuma's cable since PVC is known in the art for being used as cable covering and for its excellent dielectric properties.

3. Claims 2, 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuma in view of Iversen as applied to claim 1 above, and further in view of Wada.

The modified stopper of Katsuma discloses the invention substantially as claimed except for a rubber composition containing an organic rubber as a major constituent and a di-2-ethylhexyl phthalate.

Wada discloses a rubber composition containing an organic rubber as a major constituent and a di-2-ethylhexyl phthalate (col. 3, lines 47-48) (re claims 2 and 5). It would have been obvious to one skilled in the art to use the rubber composition as taught by Wada for the stopper (and the sheath) of Katsuma since the rubber composition taught by Wada has an excellent non-tackiness such that it can be easily handling during the connection process.

Re claim 12, it would have been obvious to one skilled in the art to use PVC for the covering layer of Katsuma's cable since PVC is known in the art for being used as cable covering and for its excellent dielectric properties.

4. Claims 3, 7, 8,10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuma in view of Iversen as applied to claim 1 above, and further in view of Yoshino.

The combination of Katsuma and Iversen discloses the invention as claimed except for the rubber including a silicon rubber as a major constituent and a bonding agent which is at least one of silyldiyne groups. Yoshino discloses a

silicone rubber composition including a compound comprising at least one of silyldiyne groups (see abstract). It would have been obvious to one skilled in the art to use the rubber composition as taught by Yoshino for the stopper of Katsuma since the rubber composition of Yoshino is improved in hardness, modulus and tear strength. Noted that the feature of the heating of the stopper being achieved by a thermal history in use of the rubber stopper is disclosed in the modified stopper of Katsuma since it comprises structure and material as claimed.

Re claim 13, it would have been obvious to one skilled in the art to use PVC for the covering layer of Katsuma's cable since PVC is known in the art for being used as cable covering and for its excellent dielectric properties.

### ***Response to Arguments***

1. Applicant's arguments filed Nov. 24<sup>th</sup> 2003 have been fully considered but they are not persuasive.

Regarding claims 1, 4 and 9, applicant argues that Katsuma discloses clamping the rubber plug to the covered wire and not heating the rubber plug, therefore, there is no suggestion or motivation for the modification. Applicant also argues that Iversen discloses a plug that is heat-bonded to a covering layer of a cable but does not teach the plug being rubber. These arguments are not found

persuasive. First of all, it has been found that the suggestion or motivation to combine does not have to be disclosed in the primary reference. Second of all, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Regarding claims 2 and 5, Applicant argues that the combination of Katsuma and Iversen fails to provide a *prima facie* case of obviousness for claim 1, there is no suggestion or motivation to use the rubber of Wada, and Katsuma does not appear to discuss tackiness of the rubber plug. In response to these arguments, it has been found that the examiner's burden of establishing *prima facie* case of obviousness is satisfied by a showing of structural similarity between the claims and prior art; it does not require a showing of some suggestion or expectation in the prior art that the structurally similar subject matter will have the same or a similar utility as that discovered by the applicant. *In re Dillon*, 16 USPQ 2d 1897. In response to applicant's argument that there is no suggestion to combine the Wada reference, the examiner recognizes that obviousness can only be established

by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to do so is found in the references themselves. Again, the motivation or suggestion to combine does not have to be disclosed in the primary reference.

Regarding claims 3, 7, 8 and 10, applicant argues that the examiner gives as motivation for the combination that "the rubber composition of Yoshino is improved in hardness, modulus and tear strength". However, Katsuma does not appear to disclose these as requirements for the rubber plug. As stated in the above, the motivation or suggestion to combine does not have to be disclosed in the primary reference.

### ***Summary***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 308-0693. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308 3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read "Chau N Nguyen", with a stylized flourish at the end.

Chau N Nguyen  
Primary Examiner  
Art Unit 2831